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14. The 3D multi-foldable device of claim 7, further comprising:

a magnet on one side and a magnetic material on another side of the 3D multi-foldable device so that a plurality of 3D multi-foldable devices are connectable to each other in series or in parallel.

15. A three-dimensional (3D) multi-foldable device comprising:

a first unit having a first center panel with a first edge and a second edge, a first wing panel, and a second wing panel, wherein the first and second edges are parallel to each other, the first wing panel is attached to the first edge of the first center panel such that the first wing panel may be rotated about the first edge by 180 degrees, and the second wing panel is attached to the second edge of the first center panel such that the second wing panel may be rotated about the second edge by 180 degrees, the first edge acting as a first rotation axis for the first wing panel and the second edge acting as a second rotation axis for the second wing panel;

a second unit adjacent to the first unit, the second unit having a second center panel with a third edge and a fourth edge, a third wing panel, and a fourth wing panel, wherein the third and fourth edges are parallel to each other, the third wing panel is attached to the third edge of the second center panel such that the third wing panel may be rotated about the third edge by 180 degrees, and the fourth wing panel is attached to the fourth edge of the second center panel such that the fourth wing panel may be rotated about the fourth edge by 180 degrees, the third edge acting as a rotation axis for the third wing panel and the fourth edge acting as a rotation axis for the fourth wing panel, the first rotation axis being coincident with the rotation axis of the third wing panel and the second axis being coincident with the rotation axis of the fourth wing panel;

a third unit adjacent to the first unit and the second unit, the third unit having a third center panel with a fifth edge and a sixth edge, a fifth wing panel, and a sixth wing panel, wherein the fifth and sixth edges are parallel to each other, the fifth wing panel is attached to the fifth edge of the third center panel such that the fifth wing panel may be rotated about the fifth edge by 180 degrees, and the sixth wing panel is attached to the sixth edge of the third center panel such that the sixth wing panel may be rotated about the sixth edge by 180 degrees, the fifth edge acting as a third rotation axis for the fifth wing panel and the sixth edge acting as a fourth rotation axis for the sixth wing panel, the third rotation axis and fourth rotation axis being perpendicular with the first rotation axis;

a fourth unit adjacent to the third unit, the fourth unit having a fourth center panel with a seventh edge and an eighth edge, a seventh wing panel, and an eighth wing panel, wherein the seventh and eighth edges are parallel to each other, the seventh wing panel is attached to the seventh edge of the fourth center panel such that the seventh wing panel may be rotated about the seventh edge by 180 degrees, and the eighth wing panel is attached to the eighth edge of the fourth center panel

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such that the eighth wing panel may be rotated about the eighth edge by 180 degrees, the seventh edge acting as a rotation axis for the seventh wing panel and the eighth edge acting as a rotation axis for the eighth wing panel, the rotation axis of the seventh wing panel being coincident with the third rotation axis and the rotation axis of the eighth wing panel being coincident with the fourth rotation axis,

wherein at least a portion of the first wing panel is combined with a portion of the fifth wing panel, a portion of the second wing panel is combined with a portion of the seventh wing panel, a portion of the third wing panel is combined with a portion of the sixth wing panel, and a portion of the fourth wing panel is combined with a portion of the eighth wing panel.

16. The 3D multi-foldable device of claim 15, wherein each of the first through fourth units is a rectangle in which a width of the first center panel is equal to the sum of the widths of the first and second wing panels, the width of the second center panel is equal to the sum of the widths of the third and fourth wing panels, the width of the third center panel is equal to the sum of the widths of the fifth and sixth wing panels, and the width of the fourth center panel is equal to the sum of the widths of the seventh and eighth wing panels, and the third and fourth units completely overlap with the first and second units when the 3D multi-foldable device is in an unfolded condition.

17. The 3D multi-foldable device of claim 15, wherein, each of the first through fourth units is a rectangle in which a width of the first center panel is equal to a sum of widths of the first and second wing panels, a width of the second center panel is equal to a sum of widths of the third and fourth wing panels, a width of the third center panel is equal to a sum of widths of the fifth and sixth wing panels, and a width of the fourth center panel is equal to a sum of widths of the seventh and eighth wing panels, and the third unit overlaps only with first and third wing panels and the fourth unit overlaps only with the second and fourth wing panels when the 3D multi-foldable device is in an unfolded condition.

18. The 3D multi-foldable device of claim 15, further comprising:

magnetic materials on at least some portions of contacting surfaces between the first center panel and the first and second wing panels, the second center panel and the third and fourth wing panels, the third center panel and the fifth and sixth wing panels, and the fourth center panel and the seventh and eighth wing panels.

19. The 3D multi-foldable device of claim 15, further comprising:

a magnet on one side and a magnetic material on another side of the 3D multi-foldable device so that a plurality of 3D multi-foldable devices are connectable to each other in series, or in parallel.

20. The 3D multi-foldable device of claim 15, wherein the first unit and the second unit are formed in a first line and the third unit and the fourth unit are formed in a second line, the first line and the second line being perpendicular to each other when the 3D multi-foldable device is in an unfolded condition.

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